FACT SHEET

as required by LAC 33:IX.3109 for major LPDES facilities, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0036391; AI 19462; PER20080001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

I. THE APPLICANT IS: Lafayette Consolidated Government
Northeast Wastewater Treatment Plant
P.O. Box 4017-C
Lafayette, LA 70502

II. PREPARED BY: Afton J. Bessix

DATE PREPARED: November 25, 2008

III. PERMIT ACTION: reissue LPDES permit LA0036391, AI19462

LPDES application received: April 30, 2008

LPDES permit issued: November 1, 2003
LPDES permit expired: October 31, 2008

EPA has not retained enforcement authority.

IV. FACILITY INFORMATION:

A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the City of Lafayette.

B. The permit application does not indicate the receipt of industrial wastewater. The industrial dischargers include:

Name of Discharger	Flow
Acadian Composites, LLC / Aeronautical Accessories, Inc.	448.18 GPD
Cintas Corporation	44,071.69 GPD

C. The facility is located at 1201 LaJaunie Road in Lafayette, Lafayette Parish.

D. The treatment facility consists of mechanical screening and grit removal, followed by primary sedimentation, mechanically aerated oxidation ditches, and secondary clarification. Disinfection is by chlorination.

E. Outfall 001

Discharge Location: Latitude 30°16'55" North
Longitude 91°58'35" West

Description: treated sanitary wastewater

Design Capacity: 1.5 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

V. RECEIVING WATERS:

The discharge is into Bayou St. Claire; thence into the Vermilion River in segment 060801 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The **critical low flow** (7Q10) of the Bayou St. Claire; thence into the Vermilion River is 167 cfs.

The **hardness value** is 67.0 mg/l and the **fifteenth percentile value for TSS** is 21 mg/l.

The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in the table below[1/]:

Overall Degree of Support for Segment	Degree of Support of Each Use						
Partial	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
	Not Supported	Not Supported	Not Supported	N/A	N/A	N/A	Full

[1/] The designated uses and degree of support for Segment 060801 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

VI. ENDANGERED SPECIES:

The receiving waterbody, Subsegment 060801 of the Vermilion-Teche Basis, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated October 24, 2007, from Boggs (FWS) to Brown (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

VII. HISTORIC SITES:

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

VIII. PUBLIC NOTICE:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit to the LDEQ contact person, listed below, and may request a public hearing to clarify issues involved in the permit decision. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

For additional information, contact:

Ms. Afton J. Bessix
Permits Division
Department of Environmental Quality
Office of Environmental Services
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

IX. PROPOSED PERMIT LIMITS:

Subsegment 060801, Vermilion River-Headwaters at Bayou Fusilier-Bourbeaux junction to New Flanders (Ambassador Gaffery) Bridge, LA Hwy. 3073, is not listed on LDEQ's Final 2006 303(d) List as impaired. However, subsegment 060801 was previously listed as impaired for phosphorus, nitrogen, organic enrichment/low DO, pathogen indicators, suspended solids/ turbidity/siltation, and carbofuran, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060801:

1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen
This TMDL was finalized January 19, 2001 and established a loading capacity equal to the 1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Dissolved Oxygen. This TMDL estimated the necessary reduction in nonpoint source loadings accelerate progress toward full support of the DO standard. Since the TMDL did not require reductions in point source loadings, no additional permit requirements are included. However, individual point sources in the Vermilion Watershed should continue to be issued on the basis of flow rates as follows:

FLOW RATE	PERMIT LIMITS
greater than 25,000 gpd	May – Dec.: 10 mg/l $CBOD_5$/5 mg/l NH_3-N/5 mg/l DO Jan.- April: 20 mg/l $CBOD_5$/10 mg/l NH_3-N/5 mg/l DO
25,000 gpd or less	secondary limits year round

Additionally, in regard to nutrients such as nitrogen and phosphorous, LDEQ has determined that organic enrichment/DO directly correlates with overall nutrient impact. Thus, when organic enrichment/DO is limited (as with the established CBOD5/ NH3-N/ DO limits), LDEQ is also in effect limiting and controlling nutrient concentrations and impacts.

Therefore, this discharge will be permitted accordingly, and the permit maintains previously established limitations reflecting the above limits.

TMDL for TSS, Turbidity, and Siltation for the 15 Subsegments in the Vermilion River Basin
As per the TMDL finalized May 3, 2001, "Point sources do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors and discharges of organic suspended solids from point sources are already addressed by LDEQ through there permitting of point sources to maintain water quality standards for DO, the wasteload allocations for point source contributions were set to zero."

Therefore, TSS limits are being maintained as previously established in this permit according to the current state water quality standards.

Vermilion River TMDL for Fecal Coliform
The *Vermilion River TMDL for Fecal Coliform* was finalized on April 5, 2001, addressing the presence of pathogen indicators in the watershed. As per this TMDL, "...there will be no change in the permit requirements based upon a wasteload allocation resulting from this TMDL." Therefore, Fecal Coliform effluent limitations will remain as previously established in this permit.

TMDL for the Pesticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins
The *TMDL for the Pesticide Carbofuran in the Mermentau River and Vermilion-Teche River Basins* was finalized on March 21, 2002 and states that "the one point source discharger, FMC Corporation's Agricultural Products Group Plant (FMC)... is the only known point source in the Vermilion-Teche Basin." As a result, the TMDL establishes a WLA for FMC only. Since this TMDL does not consider the Lafayette Northeast Plant to be a contributing source, no additional permit requirements are included.

Vermillion River TMDL for Sulfate
This TMDL was originally finalized on March 13, 2001 and established a specific WLA for the Lafayette Northeast Plant. Due to a subsequent change in criterion, this TMDL was withdrawn on June 28, 2005. Therefore, no additional permit limitations are required.

Final Effluent Limits:

OUTFALL 001

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

Effluent Characteristic	Monthly Avg. (lbs./day)	Monthly Avg.	Weekly Avg.	Basis
$CBOD_5$ May – Dec. Jan. – April	125 250	10 mg/l 20 mg/l	15 mg/l 30 mg/l	Limits are set in accordance with the *1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.*
TSS May – Dec. Jan. – April	188 250	15 mg/l 20 mg/l	23 mg/l 30 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen May – Dec. Jan. – April	63 125	5 mg/l 10 mg/l	10 mg/l 20 mg/l	Limits are set in accordance with the *1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.*
Dissolved Oxygen	---	5 mg/l	N/A	Limits are set in accordance with the *1999 Review and Assessment of the 1987 Vermilion River Watershed TMDL for Oxygen.*

**This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

Other Effluent Limitations:

1) **Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5.b.i, the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Daily Maximum) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

2) **pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C, the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

3) **Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

4) **Total Residual Chlorine**

If chlorination is used to achieve the limitations on Fecal Coliform Bacteria; the effluent shall contain NO MEASURABLE Total Residual Chlorine (TRC) after disinfection and prior to disposal. Given the current constraints pertaining to chlorine analytical methods, NO MEASURABLE will be defined as less than 0.1 mg/l of chlorine. Limit set through BPJ in accordance with the previous LPDES permit.

Toxicity Characteristics

In accordance with EPA's Region 6 Post-Third Round Toxics Strategy, permits issued to treatment works treating domestic wastewater with a flow (design or expected) greater than or equal to 1 MGD shall require biomonitoring at some frequency for the life of the permit or where available data show reasonable potential to cause lethality, the permit shall require a whole effluent toxicity (WET) limit (*Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards*, September 27, 2001 VERSION 4).

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates the effects of synergism of the effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. LAC 33:IX.1121.B.3. provides for the use of biomonitoring to monitor the effluent for protection of State waters. The biomonitoring procedures stipulated as a condition of this permit are as follows:

The permittee shall submit the results of any biomonitoring testings performed in accordance with the LPDES Permit No. LA0036391, **Biomonitoring Section** for the organisms indicated below.

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	once/quarter[1]
Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	once/quarter[1]

1 If there are no lethal effects demonstrated after the first year of quarterly testing, the permittee may certify fulfillment of the WET testing requirements in writing to the permitting authority. If granted, the biomonitoring frequency for the test species may be reduced to not less than once per year for the less sensitive species (usually *Pimephales promelas*) and not less than twice per year for the more sensitive species (usually *Daphnia pulex*). Upon expiration of the permit, the biomonitoring frequency for both species shall revert to once per quarter until the permit is re-issued.

Dilution Series - The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional concentrations shall be 30%, 23%, 17%, 13%, and 10%. The biomonitoring critical dilution is defined as 23% effluent. The critical dilution is calculated in Appendix B-1 of this fact sheet. Results of all dilutions shall be documented in a full report according to the test method publication mentioned in the **Biomonitoring Section** under Whole Effluent Toxicity. This full report shall be submitted to the Office of Environmental Compliance as contained in the Reporting Paragraph located in the **Biomonitoring Section** of the permit.

The permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.2903. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

X. **PREVIOUS PERMITS:**

LPDES Permit No. LA0036391: Issued: November 1, 2003
Expired: October 31, 2008

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Flow	Report	Report	Continuous	Recorder
$CBOD_5$				
May – December	10 mg/l	15 mg/l	2/week	6 Hr. Composite
January – April	20 mg/l	30 mg/l	2/week	6 Hr. Composite
TSS				
May – December	15 mg/l	23 mg/l	2/week	6 Hr. Composite
January – April	20 mg/l	30 mg/l	2/week	6 Hr. Composite
Ammonia-Nitrogen				
May - December	5 mg/l	10 mg/l	2/week	6 Hr. Composite
January – April	10 mg/l	20 mg/l	2/week	6 Hr. Composite

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Monthly Avg.	Weekly Avg.	Measurement Frequency	Sample Type
Dissolved Oxygen	5 mg/l minimum	---	2/week	Grab
Total Residual Chlorine (TRC)	---	---	2/week	Grab
Fecal Coliform Colonies/100 ml	200	400	2/week	Grab
pH (Standard Units)	---	---	2/week	Grab
Whole Effluent Lethality				
Ceriodapnia dubia	Report	Report	1/quarter	24-Hr Composite
Pimephales promelas	Report	Report	1/quarter	24-Hr Composite

The permit contains biomonitoring.

XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:

A) Inspections

A review of the files indicates the following inspections were performed during the period beginning December 15, 2006 and ending June 26, 2007 for this facility.

Date – December 15, 2006
Inspector - LDEQ
Findings and/or Violations -

1. A DMR review revealed no excursions of permit limits since the last inspection on May 17, 2006.
2. There were three reported SSOs in 2007, in which one was due to a contractor cutting the force main and the other two were due to I & I.
3. The facility was operating in fine order and site review revealed all areas of the facility to be well kept.
4. Effluent observation revealed it to be clear.

B) Compliance and/or Administrative Orders

A review of the files indicates that there were no recent enforcement actions administered against this facility.

C) DMR Review

A discharge monitoring report file review indicated that there were no recent violations on file for this facility. However, a file review on September 14, 2007 indicated the following:

The Whole Effluent Toxicity (WET) Testing for May 2007 through July 2007for *Ceriodapnia dubia* was considered invalid and a retest was necessary. The *Pimephales promelas* report stated that there was a sub-lethal effect; however, evaluation of the dose response chart showed that toxicity diminished for the 50% and 100% concentrations of effluent. During this cycle of testing numerous problems were noted on all of Lafayette Utilities System plants, especially invalid tests and abnormal toxicity dose responses. The contract laboratory's corrective action response was to retrain all of their personnel.

XII. ADDITIONAL INFORMATION:

The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDLs. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDLs for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

In accordance with LAC 33:IX.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b) (2) Cc) and CD); 304(b) (2); and 307(a) (2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit; or
3. Require reassessment due to change in 303(d) status of waterbody; or
4. Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

Final effluent loadings (i.e. lbs/day) have been established based upon the permit limit concentrations and the design capacity of 1.5 MGD.

Effluent loadings are calculated using the following example:

BOD: 8.34 gal/lb x 1.5 MGD x 10 mg/l = 125 lb/day

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 1 and 5 MGD.

Effluent Characteristics	Monitoring Requirements Measurement Frequency	Sample Type
Flow	Continuous	Recorder
$CBOD_5$	2/week	6 Hr. Composite
Total Suspended Solids	2/week	6 Hr. Composite
Ammonia-Nitrogen	2/week	6 Hr. Composite
Dissolved Oxygen	2/week	Grab
Fecal Coliform Bacteria	2/week	Grab
Total Residual Chlorine	2/week	Grab
pH	2/week	Grab
Biomonitoring		
Daphnia pulex	1/quarter	24 Hr. Composite
Pimephales promelas	1/quarter	24 Hr. Composite

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, the City of Lafayette's Pretreatment Program was approved on March 16, 1984 and is tracked under the Lafyette Consolidated Government – East WWTP LPDES Permit, LA0036382. The program was modified on September 24, 1993, the incorporate TBLLs and March 22, 2004, to include major ordinance revisions and pretreatment procedures manual revisions. Because this facility has an approved pretreatment program, it is recommended that LDEQ Option 2A Pretreatment language continue to be included in LPDES Permit LA0036391. The recommendation is in accordance with 40 CFR Part 403 regulations, the General Pretreatment Regulations for Existing and New Sources of Pollution contained in LAC Title 33, Part IX, Chapter 61, and the BPJ of the reviewer.

XIII TENTATIVE DETERMINATION:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

XIV REFERENCES:

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11, "Louisiana Surface Water Quality Standards", Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2, "The LPDES Program", Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Lafayette Consolidated Government Northeast Wastewater Treatment Plant, April 30, 2008.